

What is claimed is:

1. A computer telephony system comprising:
computer telephony platforms having resources that provide computer telephony services;
service modules residing on each of the platforms, wherein the service modules manipulate the resources according to platform-dependent protocols to facilitate performance of the computer telephony services for other service modules, and communication among the service modules uses message packets having a common, platform-independent protocol;
- 10 intra-platform packet routers residing on the platforms and configured to route message packets having intra-platform destination addresses to local service modules, and route message packets having inter-platform destination addresses to an inter-platform interface; and
- 15 an inter-platform packet router associated with the inter-platform interface, the inter-platform router routing message packets having inter-platform destination addresses received from the intra-platform routers to one of the intra-platform routers residing on one of the platforms on which the service modules indicated by the inter-platform address reside.
- 20 Subj 2. The computer telephony system of claim 1, wherein each of the message packets includes one of a common set of commands and one of a set of parameters, each of the commands being operative with respect to one of the parameters to define one of the computer telephony services to be provided by one of the resources.

5 3. The computer telephony system of claim 1, wherein each of the message packets includes a source address indicating an address of one of the service modules originating the message packet, the destination address indicating the address of the service modules to receive the message packet, a command field including one of a set of commands common to each of the message packets, and a parameter field including one of a set of parameters, wherein each of the commands is operative with respect to one of the parameters to define one of the computer telephony services to be performed by one of the resources.

10 4. The computer telephony system of claim 1, wherein each of the resources comprises one of a hardware device and a software object.

15 5. The computer telephony system of claim 1, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

20 6. The computer telephony system of claim 1, wherein each of the service modules maintains a queue for receipt of the message packets, the queue defining an order of processing of the message packets by the service module, wherein each of the service modules is capable of processing message packets received from a plurality of the other service modules in an interleaved manner.

25 7. A computer telephony system comprising:
 service modules configured to manipulate resources to facilitate the performance of computer telephony services for other service modules, wherein communication among the service modules uses message packets having a common protocol; and
 a packet router configured to route the message packets to the service modules based on a destination address included in the message packet.

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8. The computer telephony system of claim 7, wherein each of the message packets includes one of a common set of commands and one of a plurality of parameters, each of the commands being operative with respect to one of the parameters to define one of the computer telephony services.

5 9. The computer telephony system of claim 7, wherein each of the message packets includes a source address indicating an address of the service module originating the message packet, the destination address indicating the address of the service module to receive the message packet, a command field including one of a set of commands common to each of the message packets, and a parameter field including one of a set of parameters, wherein each of the commands is operative with respect to one of the parameters to define one of the computer telephony services.

10 10. The computer telephony system of claim 7, wherein each of the resources comprises one of a hardware and a software object.

15 11. The computer telephony system of claim 7, wherein each of the service modules maintains a queue for receipt of the message packets, the queue defining an order of processing of the message packets by the service module, wherein each of the service modules is capable of processing message packets received from the other service modules in an interleaved manner.

20 25 12. The computer telephony system of claim 7, wherein each of the service modules manipulates one of the resources according to one of a plurality of diverse protocols.

13. The computer telephony system of claim 7, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

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5 14. A computer telephony system comprising:
computer telephony platforms; and
service modules residing on the platforms, one of the service modules accessing
resources on the platform to facilitate performance of computer telephony services for
other service modules, wherein communication among the service modules uses message
packets communicated according to a common, platform-independent protocol.

10 15. The computer telephony system of claim 14, wherein each of the message
packets includes one of a common set of commands and one of a set of parameters, each
of the commands being operative with respect to one of the parameters to define one of
the computer telephony services.

15 16. The computer telephony system of claim 14, wherein each of the message
packets includes a source address indicating an address of one of the service modules
originating the message packet, the destination address indicating the address of one of
the service modules to receive the message packet, a command field including one of a
set of commands common to each of the message packets, and a parameter field
including one of a set of parameters, wherein each of the commands is operative with
respect to one of the parameters to define one of the computer telephony services.

20 17. The computer telephony system of claim 14, wherein each of the resources
comprises one of a hardware device and a software object.

25 18. The computer telephony system of claim 14, wherein each of the service
modules maintains a queue for receipt of the message packets, the queue defining an
order of processing of the message packets by the service module, wherein each of the
service modules is capable of processing message packets received from the other service
modules in an interleaved manner.

19. The computer telephony system of claim 14, wherein each of the service modules accesses the resources according to one of a plurality of platform-dependent protocols.

5 20. The computer telephony system of claim 14, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

10 21. A method for multi-platform communication in a computer telephony system having a plurality of computer telephony platforms providing resources, wherein the resources facilitate the performance of computer telephony services, and service modules residing on the platforms configured to manipulate the resources according to one of a plurality of platform-dependent protocols to perform the computer telephony services for other service modules, the method comprising the steps of:

15 communicating information between each of the service modules via message packets having a common, platform-independent protocol, each of the message packets including a destination address indicating one of the service modules to receive the message packet;

20 routing each of the message packets having an intra-platform address to an appropriate service module on the platform; and

25 routing each of the message packets having inter-platform addresses to one of the platforms on which the service modules indicated by the inter-platform address reside.

22. The method of claim 21, wherein each of the message packets includes one of a common set of commands and one of a set of parameters, each of the commands being operative with respect to one of the parameters to define one of the computer telephony services.

5 23. The method of claim 21, wherein each of the message packets includes a source address indicating an address of one of the service modules originating the message packet, the destination address indicating the address of the service modules to receive the message packet, a command field including one of a set of commands common to each of the message packets, and a parameter field including one of a set of parameters, wherein each of the commands is operative with respect to one of the parameters to define one of the computer telephony services.

10 24. The method of claim 21, wherein each of the resources comprises one of a hardware device and a software object.

15 25. The method of claim 21, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

20 26. A service module for use in a computer telephony system having a plurality of computer telephony platforms, the service module comprising:
 means for manipulating a resource residing on one of the platforms according to a platform-dependent protocol to facilitate performance of a computer telephony service by the resource for another service module; and
 means for communicating with other service modules via message packets having a common, platform-independent protocol, each of the message packets including a destination address indicating one of the service modules to receive the message packet.

25 27. The service module of claim 26, wherein each of the message packets includes one of a common set of commands and one of a plurality of parameters, each of the commands being operative with respect to one of the parameters to define one of the computer telephony services to be performed by one of the resources.

5 28. The service module of claim 26, wherein each of the message packets includes a source address indicating an address of the service module originating the message packet, the destination address indicating the address of the service module to receive the message packet, a command field including one of a set of commands common to each of the message packets, and a parameter field including one of a set of parameters, wherein each of the commands is operative with respect to one of the parameters to define the computer telephony service to be performed by the resource.

10 Sub B' 29. The service module of claim 1, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

15 30. The service module of claim 1, wherein service module maintains a queue for receipt of the message packets, the queue defining an order of processing of the message packets by the service module, wherein the service module is capable of processing message packets received from the other service modules in an interleaved manner.

20 Sub C' 31. A service module for use in a computer telephony system having a plurality of computer telephony platforms, the service module comprising:
means for manipulating a resource residing on one of the platforms according to a platform-dependent protocol to facilitate performance of computer telephony services by the resource for another service module; and
means for communicating with other service modules according to a common, platform-independent protocol.

25 32. The service module of claim 31, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

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33. A method for communicating service requests among service modules in a computer telephony system having a plurality of computer telephony platforms, wherein each of the computer telephony platforms provides a resource that performs a computer telephony service, the method comprising the steps of:

communicating service requests among the service modules according to a common, platform-independent protocol; and

controlling the service modules with the service requests to manipulate the resources according to platform-dependent protocols to facilitate performance of the computer telephony services.

34. The method of claim 33, wherein each of the service modules communicates service requests to the other service modules via message packets having the common, platform-independent protocol, each of the message packets including a destination address indicating one of the service modules to receive the message packet.

35. The method of claim 34, further comprising the steps of routing each of the message packets having an intra-platform destination address to one of the service modules on the platform, and routing the message packets having inter-platform destination addresses received from each of the intra-platform routers to one of the service modules on one of the platforms indicated by the inter-platform destination address.

36. The method of claim 34, wherein each of the message packets includes one of a common set of commands and one or more of a plurality of parameters, each of the commands being operative with respect to one of the parameters to define the computer telephony services to be performed by the resources.

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37. The method of claim 34, wherein each of the message packets includes a source address indicating an address of one of the service modules originating the message packet, a destination address indicating the address of one of the service modules to receive the message packet, a command field including one of a set of commands common to each of the message packets, and a parameter field including one of a set of parameters, wherein each of the commands is operative with respect to one of the parameters to define one of the computer telephony services to be performed by one of the resources.

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38. The method of claim 34, wherein each of the resources comprises one of a hardware device and a software object.

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39. The method of claim 34, wherein the computer telephony services include voice, facsimile, data messaging, video, and multi-media services.

40. The method of claim 34, further comprising the step of queuing the message packets to define an order of processing of the message packets by the service modules, wherein each of the service modules is capable of processing message packets received from a plurality of the other service modules in an interleaved manner.